IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A method for attaching at least one protein to a conductive support, comprising:

coupling an activated pyrrole monomer that is an activated ester of pyrrole or a maleimide pyrrole directly to a protein to be attached to said conductive support to obtain a first solution of a protein-pyrrole coupling compound,

mixing the first solution with a second solution of the pyrrole monomer not coupled to the protein to obtain an electropolymerization solution,

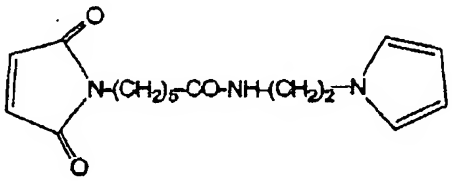
electropolymerizing the electropolymerization solution on at least one area of a conductive support, said electropolymerization being carried out with a charge of less than 50 $\mu C/mm^2$ for a synthesis time of less than 1000 ms.

Claim 2 (Previously Presented): The method according to Claim 1, wherein the at least one conductive area on which the electropolymerization is carried out is at least one block of a biosensor support.

Claim 3 (Previously Presented): The method according to Claim 1, wherein the coupling of the protein to be attached with activated pyrrole is carried out by activating the pyrrole followed by coupling the activated pyrrole to the protein to be attached.

Claim 4 (Previously Presented): The method according to Claim 3, wherein activating the pyrrole is carried out by means of N-hydroxysulphosuccinimide or of maleimide.

Claim 5 (Previously Presented): The method according to Claim 3, wherein the activated pyrrole is at least one selected from the group consisting of the following compounds:



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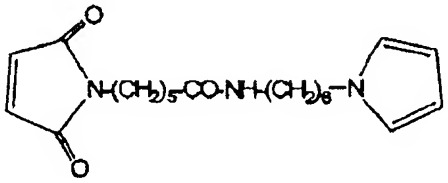

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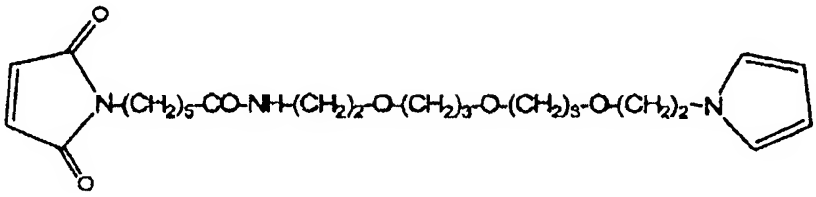

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Claim 6 (Previously Presented): The method according to Claim 1, wherein at least two proteins are attached to the pyrrole polymer successively and on two different areas of the conductive support.

Claims 7-9 (Cancelled)

Claim 10 (Previously Presented): The method according to Claim 1, wherein at least one protein attached to said conductive support is an enzyme.

Claim 11 (Previously Presented): The method according to Claim 1, wherein at least one protein attached to said conductive support is an antibody.

Claim 12 (Previously Presented): The method according to Claim 1, wherein at least one protein attached to said conductive support is an antigen.

Claim 13 (Previously Presented): The method according to Claim 1, wherein at least one protein attached to said conductive support is a hormone.

Claim 14 (Previously Presented): The method according to Claim 1, wherein at least one protein attached to said conductive support is a receptor.

Claim 15 (Previously Presented): The method of Claim 1, wherein said electropolymerization produces a copolymer film having a thickness of less than or equal to 10 nm.

Claim 16 (Previously Presented): The method of Claim 1, wherein said electropolymerization produces a copolymer film having a thickness about the diameter of the immobilized protein.

Claim 17 (Previously Presented): The method of Claim 1 in which said protein is attached to a conductive support which is a monosensor or multisensor or attached to a conductive support used to fabricate a monosensor or multisensor.

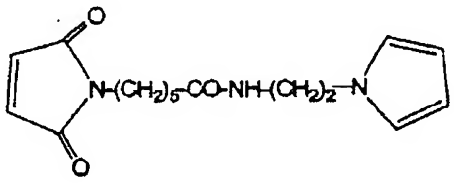
Claim 18 (Previously Presented): The method of Claim 1 in which said protein is attached to a conductive support which is a biochip or attached to a conductive support used to fabricate a biochip.

Claim 19 (Previously Presented): The method of Claim 1 in which said protein is attached to a conductive support which is or forms a part of a surface plasmon resonance device and said electropolymerization produces a copolymer film less than or equal to 10 nm.

Claim 20 (Previously Presented): The method of Claim 1 in which said protein is attached to a conductive support which is or forms a part of a device used for fluorescent detection and said electropolymerization produces a copolymer film about the diameter of the immobilized protein.

Claim 21 (Previously Presented): The method of Claim 1 in which two or more proteins are electropolymerized to a conductive support which is or forms a part of a biosensor by separately or sequentially performing said coupling, mixing, and electropolymerizing steps with two or more proteins to be attached to said conductive substrate.

Claim 22 (Previously Presented): The method of Claim 1, wherein the activated pyrrole monomer is selected from the group consisting of:



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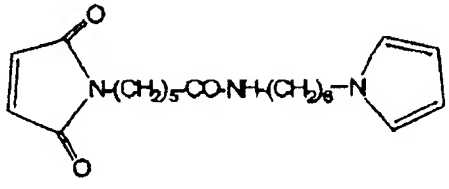

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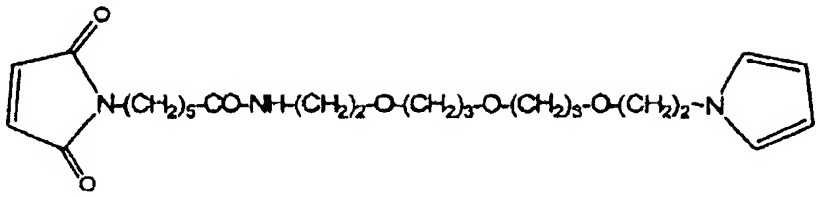

Claim 23 (Currently Amended): A method for attaching at least one protein to a conductive support, comprising:

coupling an activated pyrrole monomer that is an activated ester of pyrrole or a maleimide pyrrole directly to a protein to be attached to said conductive support to obtain a first solution of a protein-pyrrole coupling compound,

mixing the first solution with a second solution of the pyrrole monomer not coupled to the protein to obtain an electropolymerization solution,

electropolymerizing the electropolymerization solution on at least one area of a conductive support for a time and under conditions which produce a copolymer film having a thickness of no more than 10 nm.

Claim 24 (Currently Amended): A method for producing a biochip or biosensor comprising:

attaching at least one protein to a conductive biosensor support, comprising:

coupling an activated pyrrole monomer that is an activated ester of pyrrole or a maleimide pyrrole directly to a protein to be attached to said conductive support to obtain a first solution of a protein-pyrrole coupling compound,

mixing the first solution with a second solution of the pyrrole monomer not coupled to the protein to obtain an electropolymerization solution,

electropolymerizing the electropolymerization solution on at least one area of a conductive biosensor support for a time and under conditions which produce a copolymer film having a thickness of no more than 10 nm.

Claim 25 (Previously Presented): The method of claim 24 which produces a plasmon resonance sensor.

Claims 26-29 (Cancelled)

Claim 30 (New): The method of claim 1, wherein the activated pyrrole is maleimide-[n]-pyrrole, wherein n ranges between 1 and 20.

Claim 31 (New): The method of claim 23, wherein the activated pyrrole is maleimide-[n]-pyrrole, wherein n ranges between 1 and 20.

Claim 32 (New): The method of claim 24, wherein the activated pyrrole is maleimide-[n]-pyrrole, wherein n ranges between 1 and 20.